



Metro Nashville
DISTRICT ENERGY SYSTEM

Advisory Board Quarterly Meeting

Presented to
District Energy Advisory Board

August 18, 2005



Agenda

1. Call to Order
2. Review and Approval of Meeting Minutes of May 19, 2005
3. Review and Comparison of NTTC Invoices and DES Invoices
4. Review of Operations Monitoring Reports - Annual FY 2005
5. FY 2005 Budget vs. Actual Costs
6. FY 2006
 - Approved Budget
 - Capital and EDS Repair and Replacement Projects
7. Metro – GBB Project Administration Contract Amendment
8. Other Board Member Items
9. Adjourn



Metro Nashville
DISTRICT ENERGY SYSTEM

1. Call to Order

2. Review and Approval of Meeting Minutes of May 19, 2005



3. Review and Comparison of NTTC Invoices and DES Invoices

- Summary Table 3A – 2004 vs. 2003 Unit Costs
- Summary Table 3B – Projected 2005 vs. 2004 Unit Costs



Summary Table 3A - 2004 vs. 2003 Unit Costs

	Steam (\$ per m lb)			Chilled Water (\$ per ton-hr)		
	NTTC 2003	DES 2004	% Diff.	NTTC 2003	DES 2004	% Diff.
Private	\$16.34	\$19.67	20.35%	\$0.175	\$0.153	-12.64%
State	\$13.84	\$15.28	10.40%	\$0.152	\$0.143	-5.74%
Metro	\$22.78	\$24.79	8.83%	\$0.200	\$0.222	10.96%
All Initial System Customers	\$15.92	\$18.05	13.44%	\$0.170	\$0.165	-2.87%



Summary Table 3B - Projected 2005 vs. 2004 Unit Costs

	Steam (\$ per m lb)			Chilled Water (\$ per ton-hr)		
	2004	2005 Projected	% Diff.	2004	2005 Projected	% Diff.
Private	\$19.67	\$24.40	24.08%	\$0.153	\$0.169	10.38%
State	\$15.28	\$20.64	35.04%	\$0.143	\$0.152	6.22%
Metro	\$24.79	\$29.81	20.24%	\$0.222	\$0.237	7.02%
All Initial System Customers	\$18.05	\$23.15	28.25%	\$0.165	\$0.178	7.61%



4. Review of Operations Monitoring Reports

- FY2005 EGF Performance Review



Trends in FY 2005

- Weather
 - Heating season – warmer than normal; cooler than last year
 - Cooling season - cooler than normal; cooler than last year
- Steam sales - down from last year
- Chilled Water Sales – down from last year
- Electric use – trending down (due to lower sales)
- Natural gas use – trending down (due to lower sales)
- Steam production efficiency – trending down (due to low condensate return)
- Chilled Water production efficiency – flat
- EDS thermal losses – both Steam and Chilled Water lower than last year

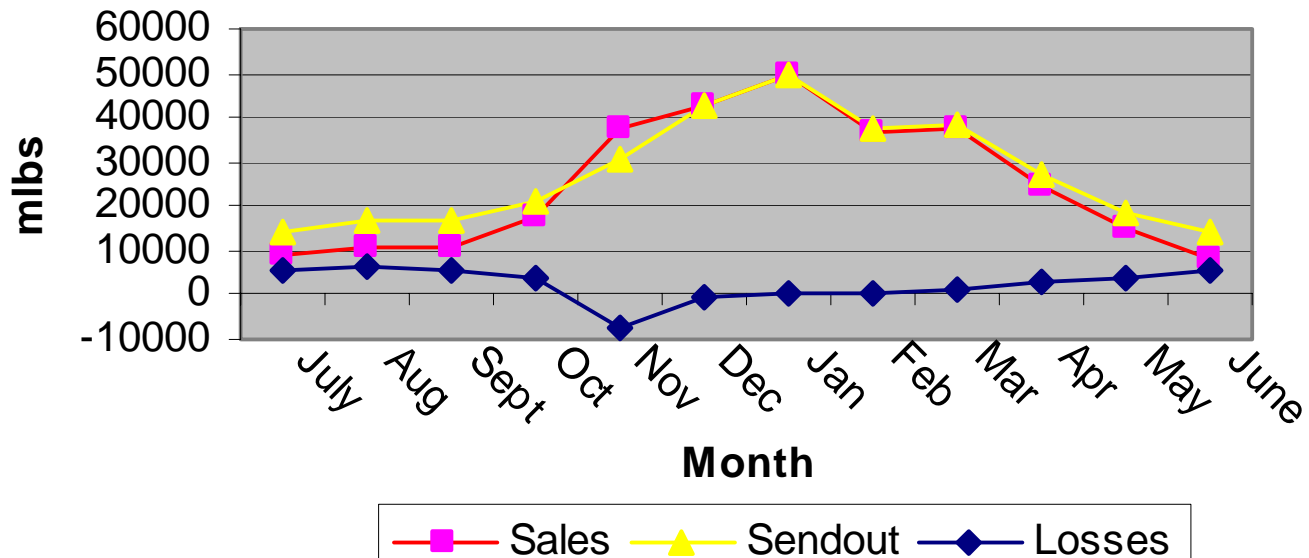


Operations

Steam Sales and Sendout –FY 2005

Sales **302,899 mlbs**

Sendout **327,618 mlbs**

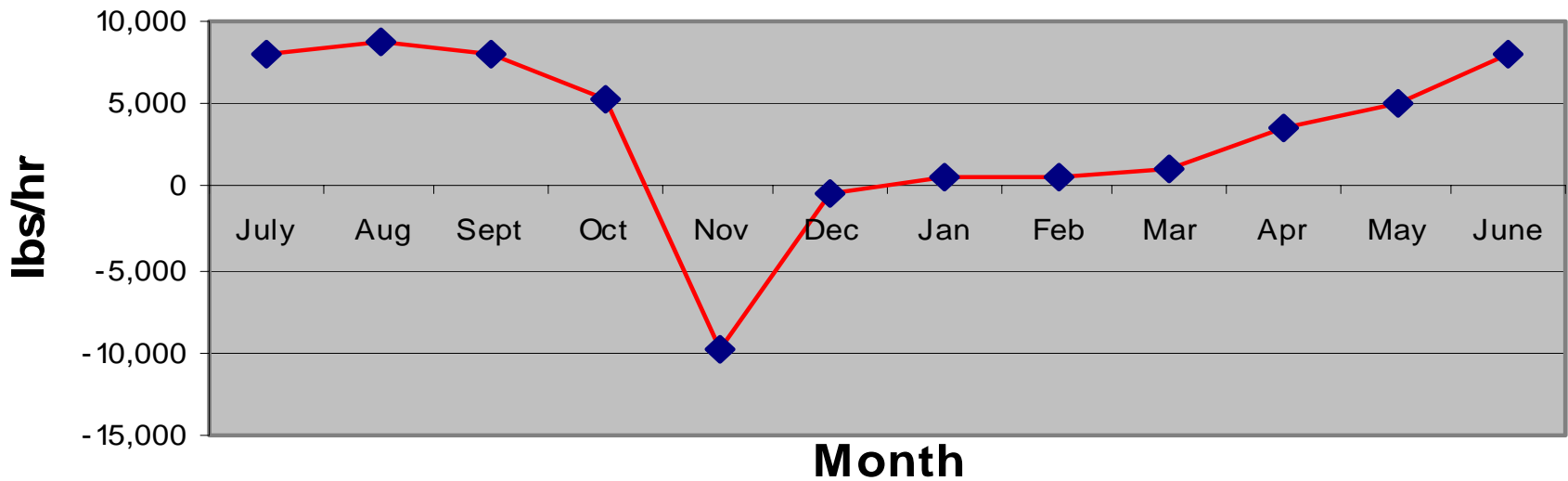




Operations

Steam Loss Rate – FY 2005

Average this year - 3,154 lbs/hr

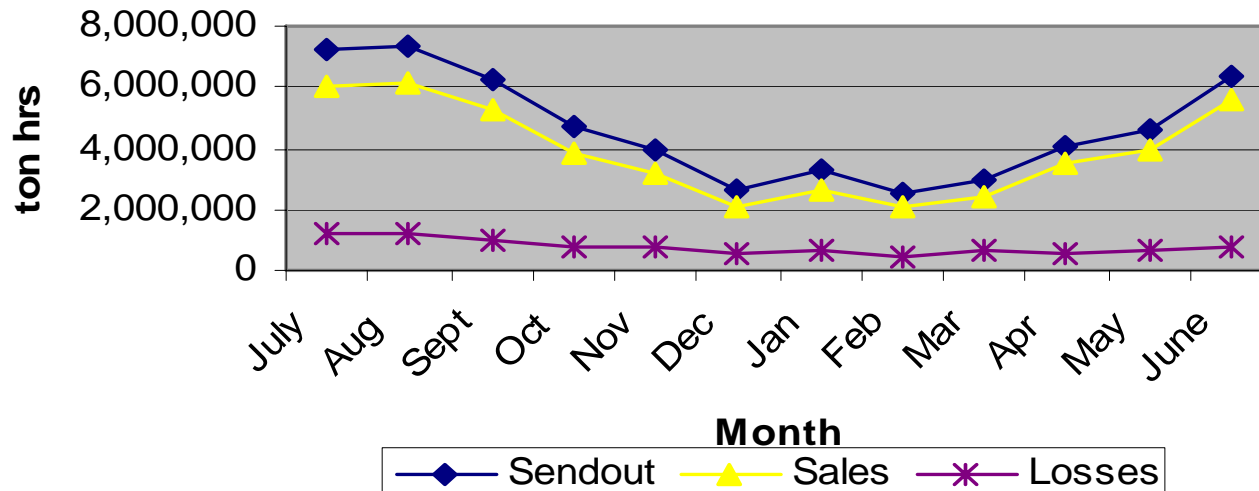




Operations

Chilled Water Sales, Sendout, and Losses – FY 2005

Sales	46,846,558 tonhrs	Sendout	55,907,100 tonhrs
Losses	9,060,542 tonhrs		

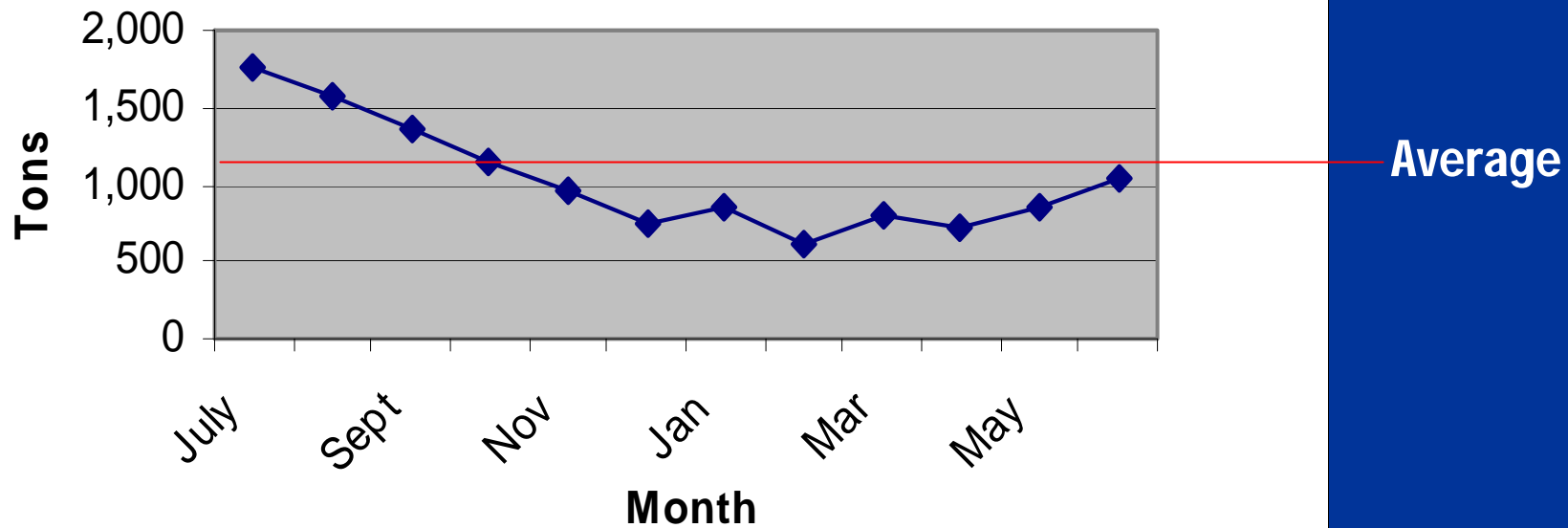




Operations

Chilled Water Loss Rate – FY 2005

Average this year – 1,034 tons



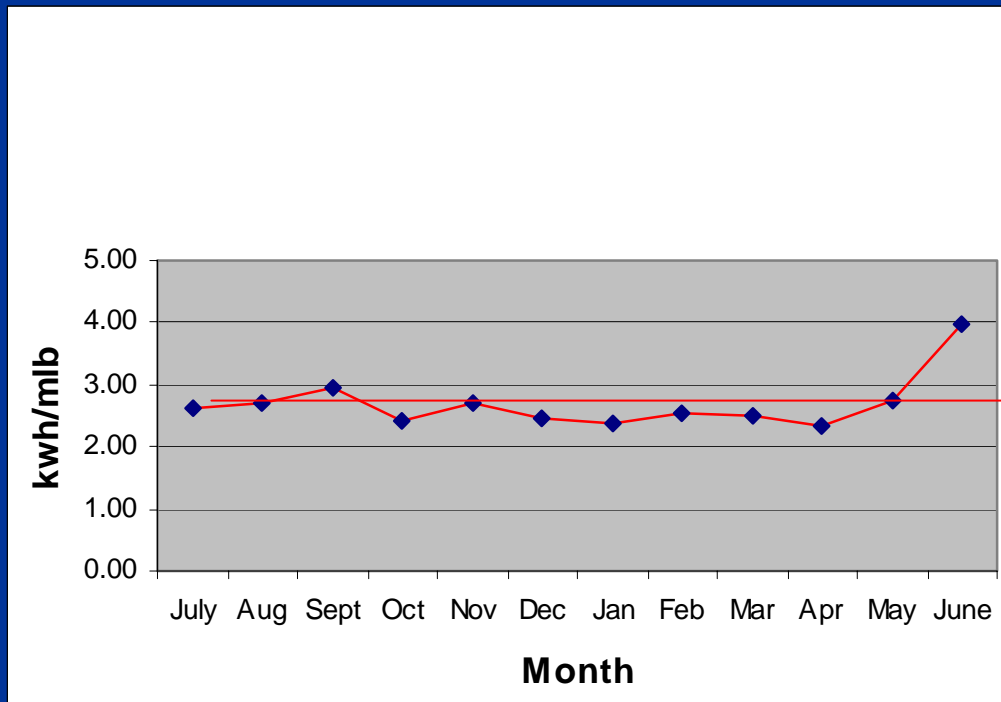


Performance Measurement

Electricity used for Steam Sendout– FY 2005

Average

2.84 kwh/MLb



Guaranty

6.0 kwh/MLb

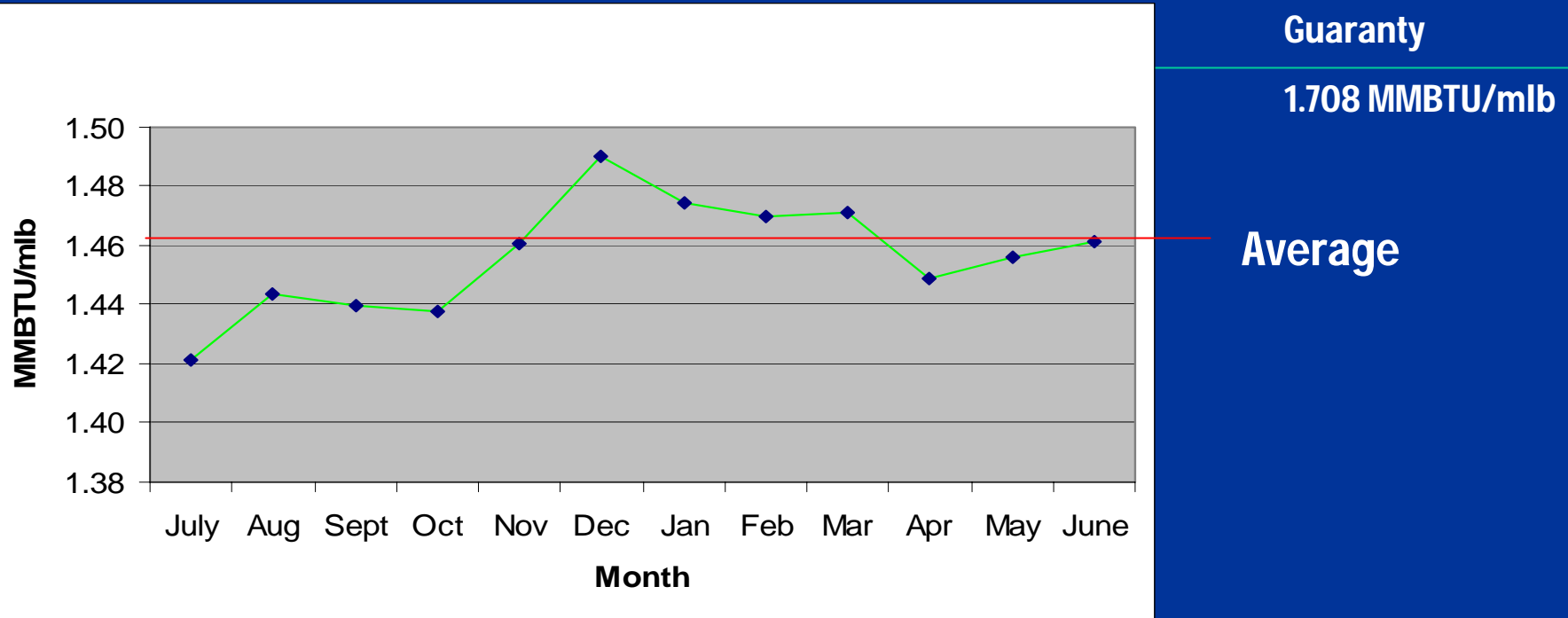
Average



Performance Measurement

Fuel used for Steam Sendout – FY 2005

Average this year – 1.46 MMBTU/mlb

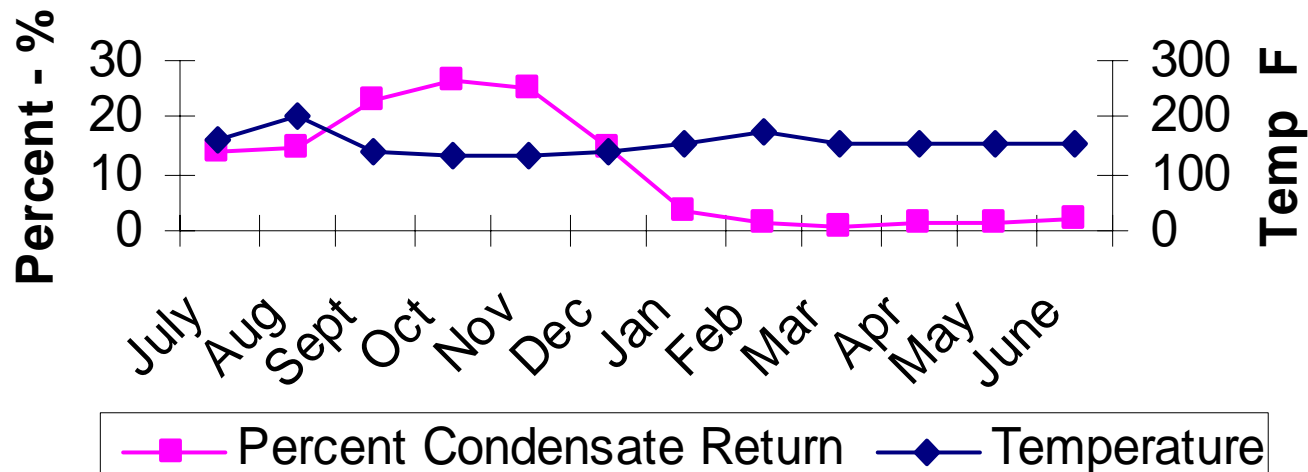




Performance Measurement

Condensate Return – FY 2005

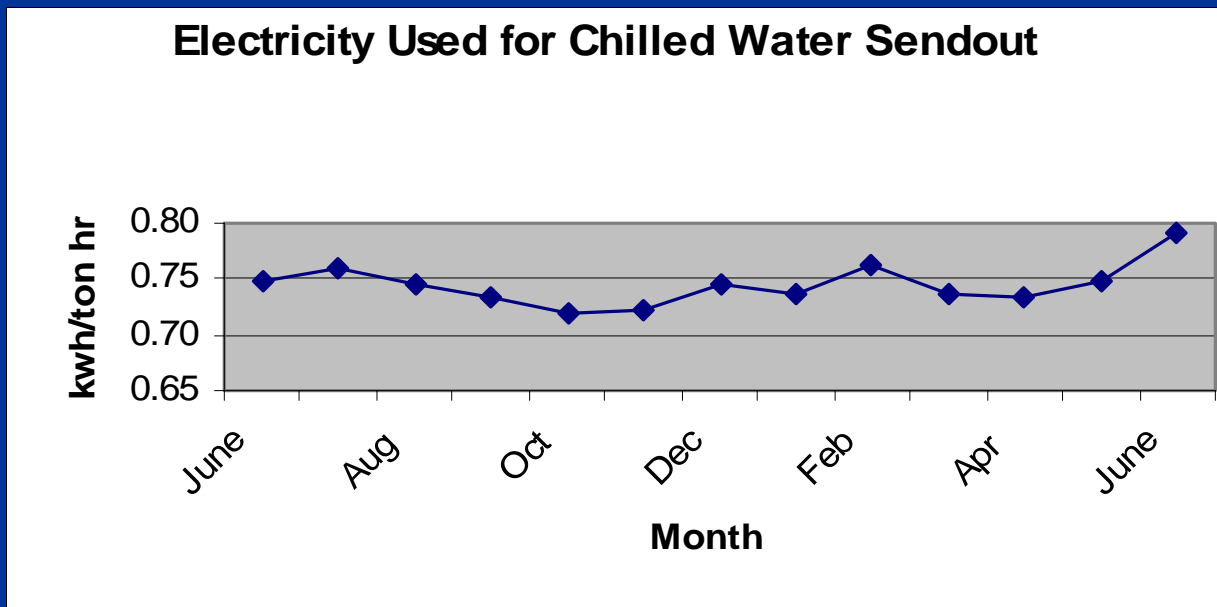
Total this year 31,215,485 lbs





Performance Measurement

Electricity used for Chilled Water Sendout - FY 2005
Average this year 0.75 kwh/ton hr



Guaranty

1.055 kwh/ton hr sold

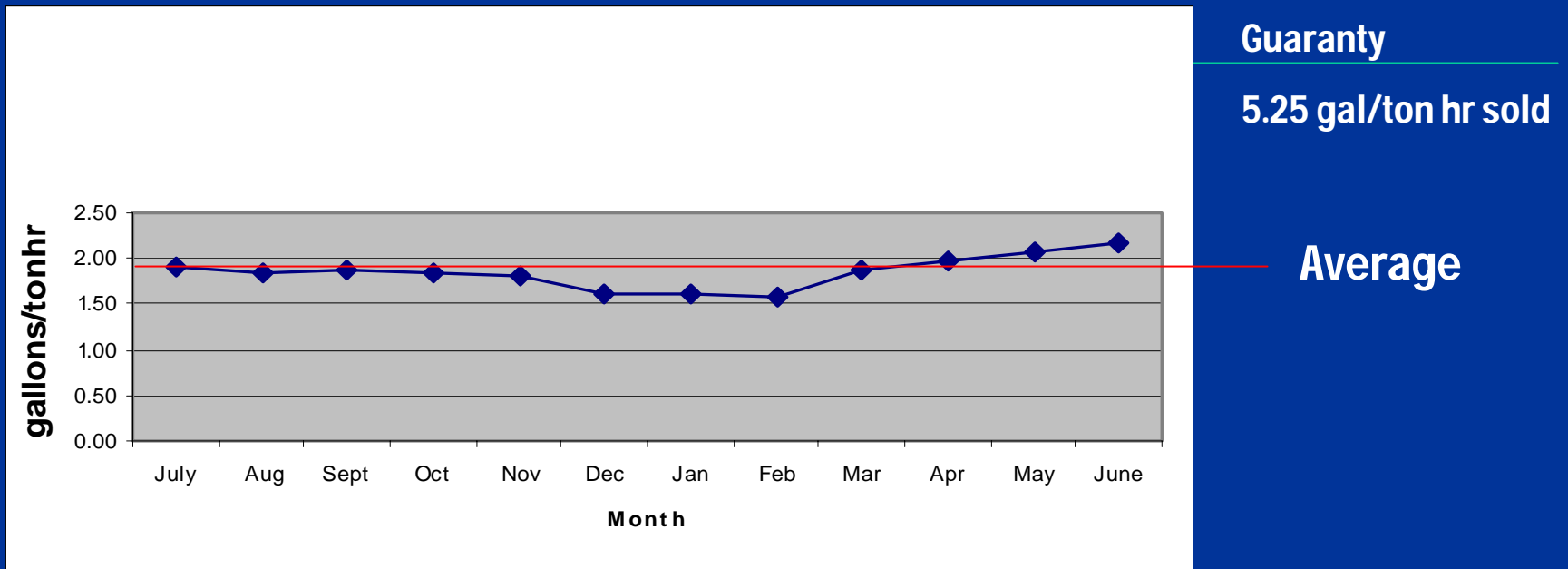
Average



Performance Measurement

Chilled Water Makeup Water Use – through end of 4th Quarter FY 2005

Average this year 1.89 gal/tonhr





Maintenance

- “IMAIN” automated PM program manages equipment service work
- Boilers have been inspected and ready for heating season
- Plant is in excellent condition with no unusual maintenance required



Facility and Grounds



Monthly Inspection Process

- Operating Equipment
- Housekeeping
- Maintenance work in process
- Building Structure
- Safety Equipment
- Instrumentation and controls
- Building exterior and grounds
- Document with digital photos



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The EGF Looks Great!





5. FY 2005 Budget vs. Actual Costs

- FY 2005 Budget vs. FY2005 Spending: See Attachment 1
- Table 5A - Natural Gas Usage and Cost
- Table 5B - Reallocation of Water & Chemicals Charges
- Table 5C - Annual True-up of FY2005 Charges



Explanation of Major Budget Variances

- **Chemicals (over)**
 - Increased make-up water
- **Metro Incremental Cost (over)**
 - Significant GSP engineering and project oversight
 - Management and oversight of natural gas purchasing strategies and contracting
 - One-time set-up activities: ARMA, ARFA, Procedures Manual, etc.
 - Metro Business Services (ITS, etc.)
 - Development of Amendment No 1 to Service Agreements
 - Support for DES Advisory Board
 - Oversight of permanent billing system to be generated by CES
- **Fuel and Utilities (under)**
 - Higher operating efficiencies than budgeted
- **Repair and Replacement (under)**
 - Use of Bond proceeds as available



Table 5A - Natural Gas Usage and Cost

FY05 Actual						
Steam Sold	Steam Out*	Deca-therms	Price per Dt	Dt per mlb out	Price per mlb out	Gas Cost All-in
302,999	327,615	478,925	\$7.499	1.462	\$10.96	\$3,591,489
FY06 Budget						
332,361	365,597	557,315	\$9.90	1.5791	\$15.63	\$5,712,967



Table 5B – Reallocation of Water & Chemicals Charges: Customers' Amendment No. 1

	Amount Originally Billed	Amount to be Allocated to Customers	Net Reductions to Customer Charges
Water for Steam	\$81,485	\$71,447	(\$10,038)
Water for Chilled Water	\$222,570	\$192,147	(\$30,423)
Chemicals for Steam	\$22,609	\$19,652	(\$2,957)
Chemicals for Chilled Water	\$53,497	\$45,910	(\$7,587)
Total	\$380,161	\$329,156	(\$51,005)



Table 5C – True-up of FY2005 Charges

Adjustment	FY05 Budget Line Items					
	FOC	Engineering	Metro Increment Cost	Water and Sewer	Natural Gas	Electricity
C/O 6A Underpayment - 4 mos.	\$26,588					
Engineering Overpayment		\$(36,700)				
Metro Increment Cost Underpay			\$229,630			
CES Fuel Efficiency Adjust						
a. Electricity for Steam						\$(2,119)
b. Natural Gas for Steam					\$906	
c. Water for Steam				\$(2,965)		
d. Water for Chilled Water				\$(17,370)		
Project Admin Overpayment	\$(126,927)					
Total Allocable Amount	\$(100,338)	\$(36,700)	\$229,630	\$(20,334)	\$906	\$(2,119)
					Total	\$71,044



6. FY 2006

- Approved Budget - Previously Distributed to Board
- FY 2006 Budget vs. FY 2005 Budget: See Attachment 2
- Capital Projects
 - Table 6A – Summary
 - Table 6B – Project Detail
- Lock-in Gas Purchase Costs for FY 2006: See Attachment 3



Table 6A - Capital Project Status Summary – 6/30/05

	Remaining Funds	Projected Spending	Balance
2002A Bond Projects	\$1,435,126	\$1,416,829	\$18,297
Repair and Replacement Projects	\$488,033	\$700,356	(\$212,323)
2005B Bond Projects	\$8,187,011	\$7,684,858	\$502,153



Table 6B – Capital Projects as of 6/30/05

	Budget	Spent through 6/30/05	Remaining to Be Spent
2002A Projects			
Beverly Briley EDS Connection	\$1,802,858	\$1,659,462	\$143,396
Tennessee Towers Decoupling	\$1,360,061	\$169,088	\$1,190,973
Deaderick St. Condensate Repair	\$494,179	\$493,548	\$631
Repair/Replacement			
Steam/cond. line replace MH 18 to L	\$392,040	\$9,100	\$382,940
Library and Archives Cond. Replace.	\$73,783	\$6,383	\$67,400
Parkway Towers Steam Line Replace	\$139,710	\$8,366	\$131,344
Manhole 5 Rehabilitation	\$158,575	\$79,904	\$78,672
2005B Projects			
New Library Connection	\$826,146	402,752	423,574
Symphony Connection	\$2,492,033	2,218,309	273,724
Viridian Connection	\$1,338,085	1,030,855	\$307,230
Renaissance Decoupling	\$708,700	\$41,151	\$667,549
Customer Metering	\$1,586,105	\$160,153	\$1,425,952



7. Metro – GBB Project Administration Contract Amendment

- Contract History
- Additional Ongoing Requirements in Amendment 3
- Table 7A – Metro DES Project Spending to Date from inception
- Table 7B – Metro Project Spending Plan
- Table 7C - Metro DES Project – Sources



Contract History

Date	Amendment	Amount (\$)
April 16, 2002	Original	\$1,685,000
January 28, 2003	#1	\$2,455,000
April 9, 2004	#2	\$3,140,330
Now	#3	\$5,805,825



Table 7A – Metro DES Project Spending to Date from inception

Fiscal Year	Contractor						
	GBB	GS&P	HDR	MP&F	GSC	Others	Total
FY02	\$ 41,934.00	\$ -	\$ -	\$ -	\$ -	\$ -	\$ 41,934.00
FY03	\$ 675,111.00	\$ 796,239.00	\$ 90,177.00	\$ 57,644.00	\$ -	\$ 53,702.00	\$1,672,873.00
FY04	\$ 600,746.00	\$ 660,757.00	\$ 53,701.00	\$ 44,828.00	\$ 69,752.00	\$ 13,629.00	\$1,443,413.00
FY05 (10 mos. – GSP 9 mos.)	\$ 460,474.00	\$ 372,442.00	\$ 15,723.00	\$ 7,149.00	\$ 76,521.00	\$ 18,586.00	\$ 950,895.00
Grand Total	\$1,778,265.00	\$1,829,438.00	\$159,601.00	\$109,621.00	\$146,273.00	\$ 85,917.00	\$4,109,115.00



Highlights of Amendment 3

Additional Ongoing Requirements

- Natural gas purchasing management
- GS & P engineering for new customers, decoupling, and EDS repair and replacement projects
- Managing various new customers and EDS repair and replacement projects
- Monthly and quarterly reporting
- Customers Amendment No. 1 for new metering and pass through cost allocations
- Monthly coordination calls, meeting, and other activities to coordinate and administer the activities of CES
- Comparisons of Thermal and DES customer invoices
- Administration and management of additional sub-consultants and legal advisors
- Supervise annual financial true-ups with customers and CES as required by the agreements



Highlights of Amendment 3

Additional Ongoing Requirements (cont'd)

- Metro DES Advisory Board support
- Participate in Metro's annual budgeting process for the DES enterprise
- Oversee the development of a permanent billing data base and billing system to be generated by CES
- Work with Metro Accounts
- Negotiation of amendments to Management and Fuel Purchasing Agreements with CEPS
- Organize and maintain DES contract, financial and operational documents and records
- Develop and maintain administrative procedure manuals and related documents



Table 7B – Metro Project Spending Plan

Fiscal Year	Contractor					
	GBB	GS&P	HDR	MP&F	GSC	Total
Total FY05 (May - June)	\$ 92,095.00	\$411,340.00	\$ 6,377.00	\$ 5,851.00	\$ 16,058.00	\$ 531,721.00
FY06	\$371,876.00	\$281,800.00	\$ 5,000.00	\$10,000.00	\$ 73,812.00	\$ 742,488.00
FY07 (8 mos.)	\$186,868.00	\$ 89,600.00	\$ 2,500.00	\$ 5,000.00	\$ 49,520.00	\$ 333,488.00
Total	\$650,839.00	\$782,740.00	\$13,877.00	\$20,851.00	\$139,390.00	\$1,607,697.00
10% Contingency (FY06 - 07 only)	\$ 55,874.00	\$ 37,140.00	\$ 750.00	\$ 1,500.00	\$ 12,333.00	\$ 107,598.00
Grand total	\$706,713.00	\$819,880.00	\$14,627.00	\$22,351.00	\$151,723.00	\$1,715,295.00



Table 7C - Metro DES Project – Sources

Sources	FY06	FY07 (8 mo)
2002A Bonds	\$26,000	
Operations		
Project Administration	\$325,000	\$224,283
Metro Marketing	\$100,000	\$69,010
Natural Gas	\$35,012	\$27,208
Other Metro Agencies	\$38,800	\$22,312
Sub Total	\$498,812	\$342,813
2005B Bonds		
Design	\$78,800	
CM/Proj Mgmt	\$106,500	\$5,000
Project Development	\$170,000	
Contingency	\$45,000	\$8,300
Sub Total	\$400,300	\$13,300
Total	\$899,112	\$356,113



8. Other Board Member Items

- Next Meeting November 17, 2005

9. Adjourn